motor mate

Workstation Console

Owner's Manual

CM Labs®

http://www.cmlabs.net

Greetings

Friends,

Thank you very much for buying MotorMate ! MotorMate is the result of many hundreds of hours of design and engineering, and we hope that you will be pleased with it. You will find that MotorMate has many unique features and it will quickly become the central focus of your control room.

Thanks for your support.

Kindest regards,

Carl Malone
President
CM Labs

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CM Labs reserves the right to make improvements or changes at any time to the products described in this manual.

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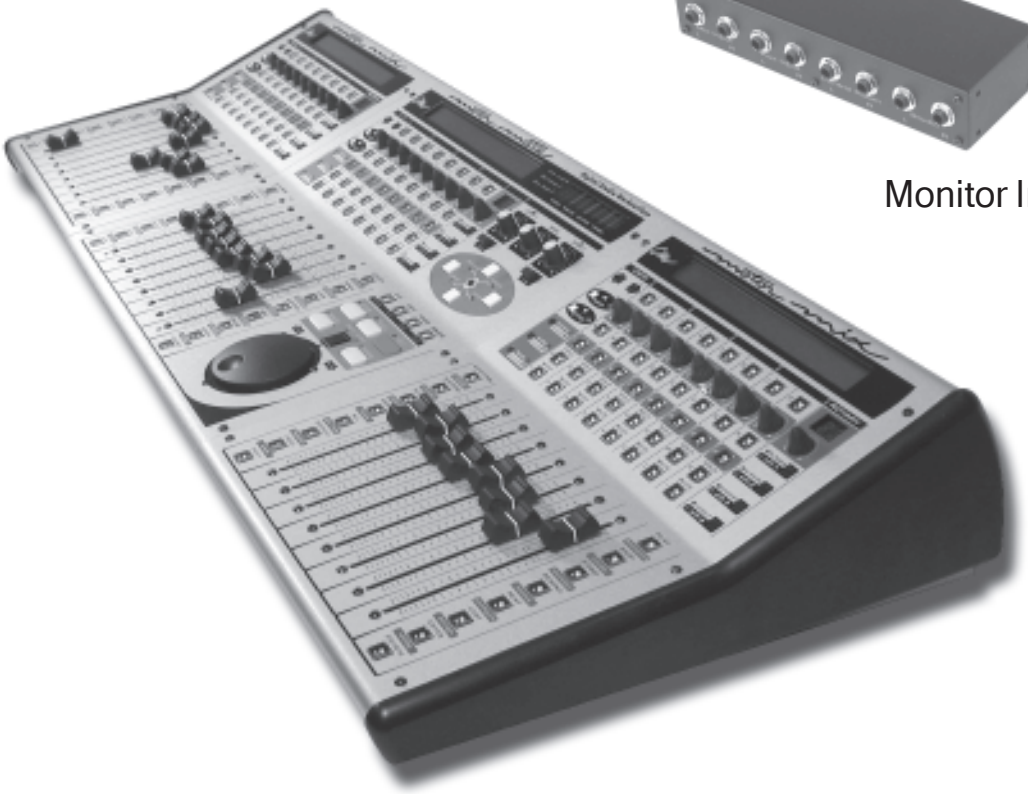
MotorMate

Monitor Interface Module



SixtyFour

MP-8

MIDI Connections

Connect the MIDI output of MotorMate to a MIDI input port on your MIDI interface. Connect the MIDI output of the same port to the MIDI input on MotorMate. Make a note of the port number you used. If your MIDI interface has MIDI activity indicators for its ports, rotate the MotorMate Jog wheel, and you should see the MIDI input activity light on the port connected to MotorMate. If this does not happen, check your connection or cables.

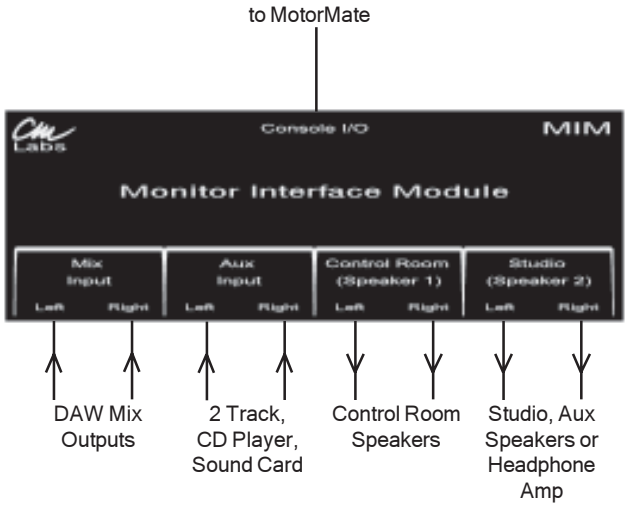
RS-232 Port Connections (Optional)

Connect the RS-232 connector on MotorMate to either a CM Labs SixtyFour Studio Router or an MP-8 Eight Channel Mic Preamp. This allows MotorMate to control all the features in those products.

Audio Connections

Monitor Interface Module (MIM)

Connect the Monitor Interface Module (or MIM for short) to MotorMate using the 15 pin D-Sub cable supplied with your MotorMate.



Connect your left and right workstation audio outputs to the MIX Inputs on the MIM. Connect your 2 Track, CD player Sound Card ,or other device to the Aux Inputs on the MIM. The Mix and Aux inputs are added together before being sent into the monitor controls on MotorMate.

Connect both MIM Control Room (Speaker 1) outputs to your main Control Room amp inputs. Connect both MIM Studio outputs (Speaker 2) to your main Studio amp inputs or to a second set of Control Room speakers, or use these outputs to feed a headphone distribution system. All the inputs and outputs are balanced, so we recommend using TRS type cables for interconnect.

Computer Setup

Apple OSX Audio MIDI Set Up

Step 1.) Install your MIDI interface as per the installation directions of the MIDI interface manufacturer. Make a note of which MIDI port you connected MotorMate to on your interface.

Step 2.) Open the Apple Audio MIDI Setup (AMS). Click on the MIDI Devices tab.

Step 3.) Click on the Add Device icon. In the Device Name box type MotorMate. Scroll down the Manufacturer list and select CM AUTOmation (our former name). Click on the box beside Model and select “MotorMix”. (Since MotorMate uses the same type of MIDI protocols as MotorMix).

Step 4.) Select Transmit Channel 1. Select Receive Channel 1.

Step 5.) Click on “OK”. If a warning message appears complaining about having same device ID’s, click on that box’s OK.

Step 6.) Then connect the virtual cables on the Motor-Mate icon to corresponding MIDI port on the MIDI interface icon.

Step 7). Close AMS.

Windows XP Set Up

Install your MIDI interface as per the installation directions of the MIDI interface manufacturer. Make a note of which MIDI port you connected MotorMate to on your interface.

Pro Tools Setup

Step 1.) Open a Pro Tools session and click on the "Setups" tab. Open the "Peripherals" menu and click on the MIDI Controllers tab.

Step 2.) Click on the small box just below "Type" and select "MotorMix". Since MotorMate uses the MotorMix personality file already in ProTools, no special file is needed.

Step 3.) Click on the small box just below "Receive From" and select the MotorMate cable input.

Step 4.) Click on the small box just below "Send To" and select the MotorMate cable output. At this point, the small box under "# Ch's" should show "8".

Step 5.) Click on the "OK" box in the "Peripherals" menu.

Step 6.) If you are using Pro Tools 5.1, click on the MIDI tab and select "Input Devices". Click on the MotorMate listed. This will enable Pro Tools to receive its MIDI input.

Step 7.) In Pro Tools 5.1 and higher, go to the Set up window and choose Preferences. In the Preferences box, click on Operation. Then select 'Classic' located in the Numeric Keypad Mode Section. Classic Numeric Keypad allows you use the Locate function on MotorMix.

Step 8.) Press the PLAY switch on MotorMate, the session will start to play and the Time Code display on MotorMate will show the play time.

Step 9.) Each time you use Pro Tools you should have MotorMate powered up first to insure that it gets a complete update of your most recent session settings.

Digital Performer Software Setup

Step 1.) Log on to http://www.cmlabs.net and open the MotorMix page. Click on the Digital Performer link and follow the download instructions there.

Step 2.) Expand the MotorMix archive.

Step 3.) Put the MotorMix Plug-in into your DP Plug-ins folder.

Step 4.) Reboot your Mac and launch Digital performer.

Step 5.) Pull down the "Basics" menu and select "Control Surface Setup" and select MotorMix in the Hardware box. (Since MotorMate uses the same MIDI protocols as MotorMix).

Step 6.) In the " MIDI Communication:" box select "MotorMate" or whatever name you have used to define it in your MIDI device setup. Click "OK" and you'll be up and running.

Note: CM Labs maintains the MotorMix plug-in for Digital Performer. Please check our website for updates to the Plug-in.

Steinberg Cubase Setup

Step 1.) Launch Cubase and click on the Devices menu. Click on Device Setup.

Step 2.) Click on Add/Remove, then select Mackie HUI in the Device Classes list. Click on Add. Then Click O.K.

Step 3.) Click on the Devices menu. Click on Mackie HUI in the Device Classes list. Then select the proper MIDI Input and MIDI Output port for MotorMate. Then click O.K.

Steinberg Nuendo Setup

Step 1.) Launch Cubase and click on the Devices menu. Click on Device Setup.

Step2.) Click on Add/Remove, then select Mackie HUI in the Device Classes list. Click on Add. Then Click O.K.

Step 3.) Click on the Devices menu. Click on Mackie HUI in the Device Classes list. Then select the proper MIDI Input and MIDI Output port for MotorMate. Then click O.K.

Multiple Unit Configurations

Multiple units will control the mixer by 16, 24, or 32 channels at a time. MotorMate will control the lower 8 channels in a bank, and MotorMix will control the remaining channels in the bank of 16, 24, or 32. View switching will be 16, 24, or 32 channels wide. View changes can be done from either MotorMate or MotorMix. Plug-in control is done entirely from MotorMate.

Connections

Connect MotorMate to your MIDI interface with both MIDI cables and MotorMix with both MIDI cables to another MIDI port on your interface.

Multiple units act as separate MIDI devices. The MotorMate and MotorMixes each must be set up identically in your MIDI device definitions except for the device names you use. In ProTools or Digital Performer, set up the MotorMix as an additional MIDI controller. MotorMate must remain first in the controller list.

If you wish to physically connect MotorMate and MotorMix together, see page 9.

Troubleshooting
Problems can occur in 3 areas.

1.) MotorMate

MotorMate Final Test
Using a known good MIDI cable, simply connect the MotorMate MIDI output directly into the MIDI input on MotorMate. Press and hold the ENTER and ESC switches on MotorMate and apply power. MotorMate will enter Final Test mode.

MIDI:
With a MIDI cable connected from MIDI IN to MIDI OUT there should be a capital m (M) appear just to the right of the word “Test” on the lower row of the LCD.

Fader Touch:
Touch each MotorMate fader knob. The channel LED’s and Time Code LED’s should light.

Fader Position:
Move the faders from bottom to top and upper row of the LCD display will display fader position from 000 to 255.

Rotary Pots:
Rotate the rotary pots, and the motorized faders should move up and down.

Switches and LED’s:
Press each MotorMate switch and its associated LED should lite, and the Time Code display should light when the switch is down.

View and Zoom sticks:
Push either stick in all 4 directions (left-right and up-down). The associated LED’s will light (along with the Time Code LED’s) to indicate which direction you are pushing.

Push either stick in. All of the associated LED’s will light (along with the Time Code LED’s).

Jog Wheel:
Rotate the Jog Wheel clockwise and the lower row of the LCD will show “Forward SS PP” where SS is the speed you are rotating the wheel, and PP is the absolute position of the wheel. The position should go from 00 to 3F.

Rotate the Jog Wheel counter clockwise and the lower row of the LCD will show “Backward SS PP” where SS is the speed you are rotating the wheel, and PP is the absolute position of the wheel. The position should go from 3F to 00.

If the self test fails, then contact CM Labs at techsupport@cmlabs.net.

2.) The MIDI interface must talk to the computer operating system. If your MIDI interface installation disk includes a diagnostic program, run that to check the integrity of the interface and its communication with the operating system. If you can successfully run a diagnostic program, then proceed to step 3 below.

If it does not have a diagnostic, or the diagnostic fails, consult the manufacturer of the interface.

3.) The computer operating system must talk with the DAW application. Recheck all the MIDI setup settings you made in Windows, Free MIDI, or the Apple OSX AMS setup. If these steps are in order, then recheck the software setups.

Multiple Unit Assembly
MotorMate and MotorMix units can be physically connected to each other to create a single larger console.

You may connect MotorMate and as many as 3 MotorMixes together to create a 32 channel console.

Tools required
1.) #4 Phillips head screwdriver.
2.) 1/16" Allen wrench or driver.

Parts Required
1.) 4 pieces 4-40 x 3/8" Phillips head screws (per unit).
2.) 4 pieces 4-40 Nut with captive lock washers (per unit).

Preparation
1.) Remove power cables from all units.
2.) Remove any other cables connected to the units.

Top Cover Removal
1.) Remove 6 Phillips head screws on front and rear of chassis on all Motor Mix units.
2.) Remove 6 Allen Panhead screws from top of all Motor Mix units.
3.) Turn the MotorMix units so the back sides (power entry side) are facing you.
4.) Lift up the rear of the top cover about 2 inches and rest it on the ledge provided inside.
5.) Raise the rear cover up about 2 inches more with one hand. With your free hand disconnect the 2 cables plugged in to the Power Module in the chassis bottom. Rest the chassis top back on the inside ledge.
6.) Reach your arm over Motor Mix and grab the chassis at the front (near the faders). With your other hand, lift the Top Cover off of the ledge about 3 inches. Push forward and lift the top cover free. Set the Top Covers aside. Don't worry about keeping track of which top goes with which bottom.

Side Cheek Removal
If you are joining 2 units, you must remove a Left Side panel from one, and the Right Side panel from the other. If you are joining 3 or more units, you must remove a Left Side Cheek from one, and the Right Side panel from another, and both Side panels from the remaining Motor Mix units.

Connecting chassis bottoms
1.) Position the Chassis Bottoms side by side just as they will be connected together. Don't worry about keeping track of which bottom goes with which top. Insert four 4-40 machine screws between each chassis bottom and finger tighten the nuts.
2.) Check and adjust the alignment between the Chassis Bottoms, and tighten the 4-40 screws.

Re-Fitting Top Covers
1.) Position the Chassis Bottom assembly so the Power Modules side face you.
2.) Move a Top Cover into position over one end of the chassis bottom assembly. Position Top Cover at about a 45 degree angle with the rear side high. Slip Top Cover at fader side over edge of Chassis Bottom and lower rear side down to rest on ledge of Chassis Bottom.
4.) Lift the Top Cover slightly at rear and reach inside and plug in the Power Module Cables. Note: The locking tabs on the connectors go towards the center of the Power Module.

IMPORTANT NOTE: PLEASE DOUBLE CHECK THAT THESE CONNECTORS ARE NOT OFF BY A PIN. IF THEY ARE CONNECTED IMPROPERLY, SEVERE AND WIDESPREAD DAMAGE WILL RESULT WHEN POWER IS APPLIED.

5.) Lower the Top Cover completely while checking for binding wires inside along the top.
6.) Repeat steps 1 - 5 above for remaining units without forcing the Top Covers fully down. When lowering the remaining tops into final position they may become tight at the top edge. Lift the entire assembly at the center and they should drop into place.

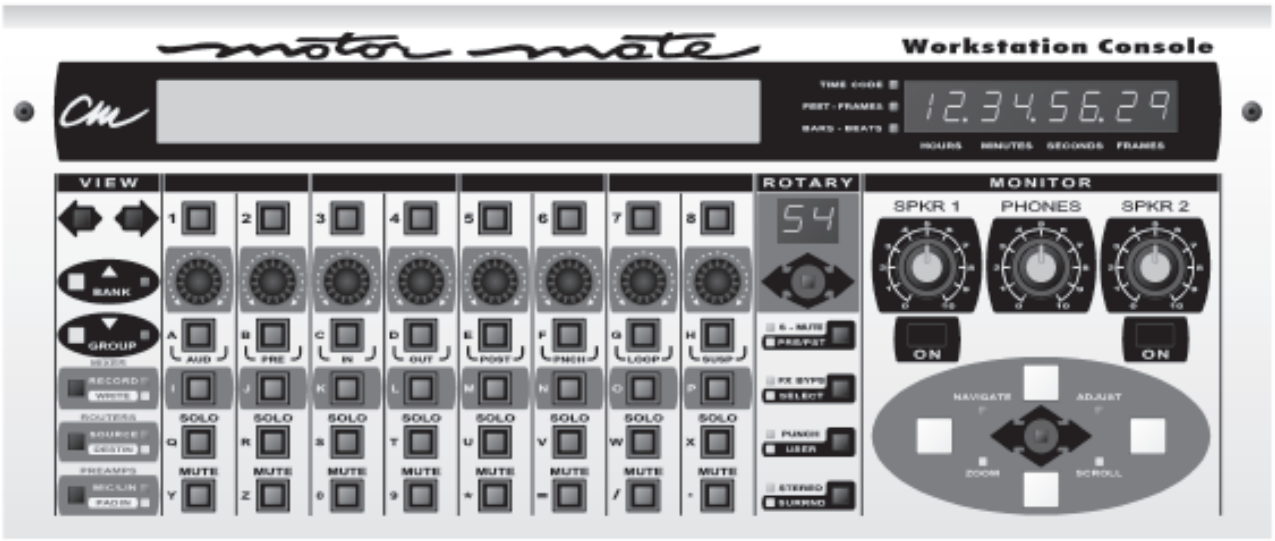
Securing Top Covers
1.) Install the (3) #4 Black Phillips sheet metal screws into each chassis rear but do not tighten.
2.) Install the (6) 4-40 Black Allen screws into each Top Cover but do not tighten.
3.) Install the (9) #4 Black Panhead Phillips sheet metal screws into each chassis front but do not tighten.
4.) Check and adjust the alignment between the Chassis Bottoms, and tighten the 4-40 Black Allen screws.
5.) Tighten all remaining screws.
6.) Turn Power Switches off on all units and connect power cables.
7.) Power on a unit and check for proper power up cycle. Repeat for all units. Note that the LCD contrast controls should be adjusted until all units have same contrast.

The MotorMate operations and features described in this manual are detailed to describe its operations primarily with ProTools from Digidesign. Although MotorMate operates with several other DAW platforms, some of the features described in this manual operate differently or are not implemented in other software as of this date.

If there are features described in this manual that you would like to see implemented in other software, please contact us at techsupport@cmlabs.net, and we will forward that information to the software company. With enough input from our customers, it is very possible to continue to increase support.

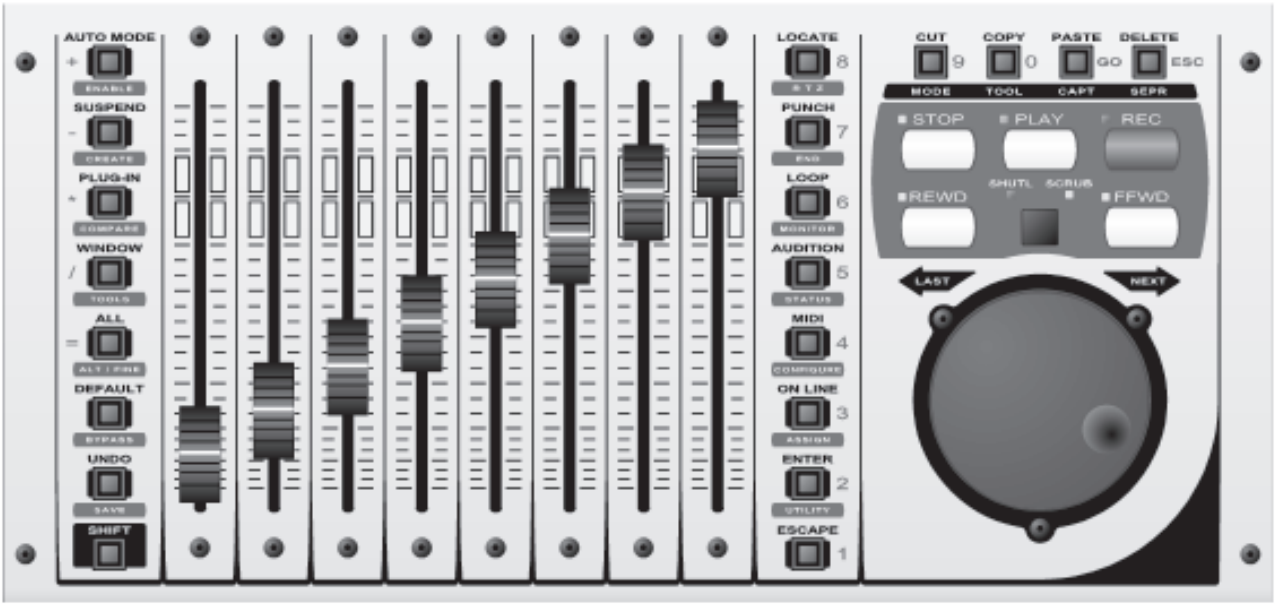
Thank you for your patience.

MotorMate Upper Panel



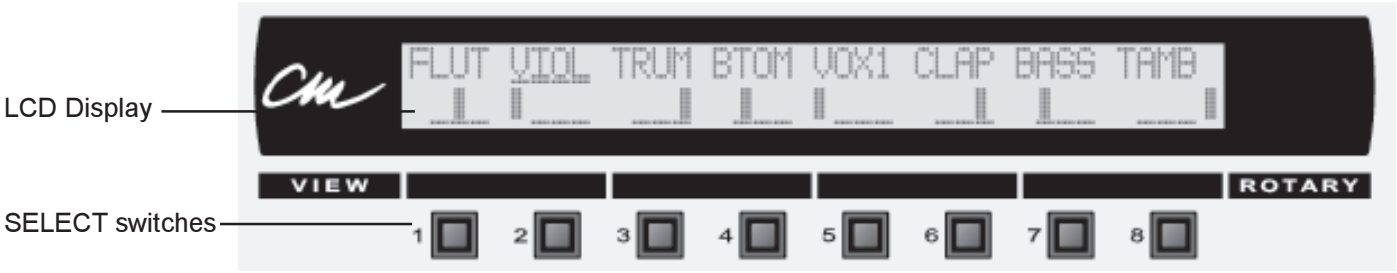
The MotorMate Upper Panel is the control surface for many of the mixer functions on all the session channels or tracks. From this panel, you will control the pans, sends, plug-in's, mutes, solos, record readies, grouping functions, automation modes, automation enables, timecode display and meters. Additionally this panel has the waveform navigator section and operates the stereo monitor section inside MotorMate and surround monitoring by connecting a CM Labs SixtyFour Studio Router. The SixtyFour and the CM Labs MP-8 Mic Preamps are also controlled from the upper panel of MotorMate. The LCD display is indispensable. It shows all track names, parameter settings and operator messages.

MotorMate Lower Panel



The MotorMate Lower Panel has the motorized touch sensitive faders and is the work surface for all the transport and editing functions. From this panel, you access the autolocator and the next and last locate switches. The modifier switches expand the functions of both the Upper and Lower Panels of MotorMate. The Clipboard Controls, in conjunction with the Navigator section on the upper panel, provide complete control of all waveform editing. The Save and Undo switches control the session file. Finally, the high resolution precision Jog/Shuttle wheel and related controls provide rapid and very fine control of edit regions and punch in/out points.

LCD Display and channel SELECT Switches



LCD Top Row

Top Row Use for DAW Application
1.) A shortened version (4 characters) of your channel labels.
2.) Plug-in switch parameter names and states (text).
3.) Special uses of channel SELECT switches.
4.) Menu pop ups from the computer.
5.) Input/Output and Send Buss Assignments.

Top Row Use for CM Labs SixtyFour studio router
1.) A shortened version (4 characters) of the source and destination labels you entered into the SixtyFour from MotorMate.
2.) The current SixtyFour memory name you entered into the SixtyFour from MotorMate.

Top Row Use for Surround Monitoring
1.) "*Master* *Center* *Surround* *Sub* " speaker labels.
2.) "Left&Rght *Center* *Surround* *Sub* " speaker offsets (when the View Stick is pushed).

Top Row Use for CM Labs MP-8 Mic Preamp
1.) A shortened version (4 characters) of the mic preamp labels you entered into the MP-8 from MotorMate.

LCD Bottom Row

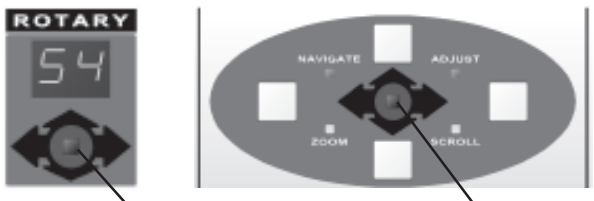
Bottom Row Use for DAW Application
1.) Channel pan (or pan right for stereo channels) position (graphically).
2.) Channel send level (graphically).
3.) Channel send pre/post state (text).
4.) Send buss assignment.
5.) Plug-in continuous parameter names (text) and settings (numeric).
6.) Channel automation mode (text).
7.) Group ID.
8.) Channel input/output assignment.

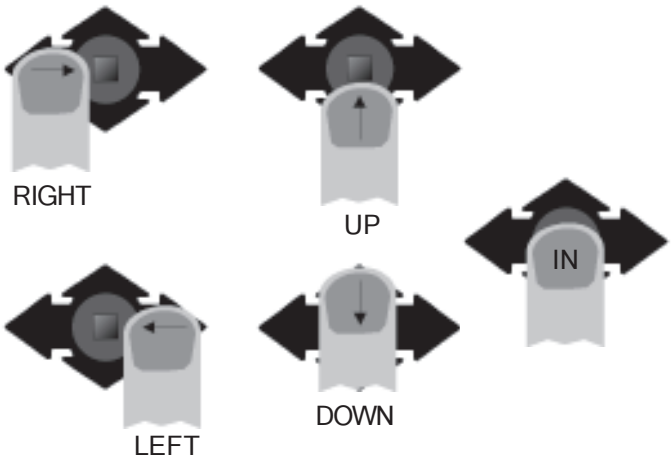
Bottom Row Use for Surround Monitoring
1.) Overall surround speaker level (text).
2.) L*R speaker offset level (text).
3.) Center speaker offset level (text).
4.) L*R surround speaker offset level (text)
5.) Subwoofer speaker offset levels (text).

Bottom Row Use for CM Labs SixtyFour studio router
1.) Source and destination levels in dB (text).

Bottom Row Use for CM Labs MP-8 Mic Preamp
1.) Mic preamp gain setting in dB (text).

Using the View Stick and the Zoom Stick





These sticks have 5 "directions of motion" and you can move them left, right, up, down and in. *It is important where you place your finger to operate them and how you make your movements to achieve the greatest degree of control. For horizontal and vertical movements, touch the black arrows around the side of the stick, and move your finger sideways or up/down. To push in the View Stick, place your finger on the tip and press in.*

Channel Level Meters
The character to the right of the channel label is used to display the signal level. There are 5 states for this meter.

OFF -20dB -10dB +0dB +10dB

Channel SELECT Switches

These 8 are the top switch row located just below the LCD and each one has its own green LED.

Channel SELECT's and DAW functions
These switches allow the channel strips to be selected for grouping, deletion, assignment etc. When a channel SELECT switch is pressed, it lights up to indicate that the channel is selected. When the MotorMate view is changed (swapping banks), the originally selected channel remains selected. Selected channels not in the current view will remain selected.

Several channels can be also be selected at a time. There are 2 ways to add or subtract channels to a selection.
1.) Simply press and hold down one SELECT switch and tap additional SELECT switches to add or subtract them from the selection.
2.) Depress the SHIFT key on the MotorMate (or the keyboard) and tap additional SELECT switches to add or subtract them from the selection.

To select all channels (not just the ones being viewed by MotorMate) press and hold down the ALL switch on MotorMate and press any SELECT switch. Holding SHIFT and ALL switches on MotorMate, and then a SELECT switch changes the select state of that channel and also changes all other channels to the opposite select state. Pressing a single channel SELECT switch more than once will not change its state. Hold down the SHIFT switch and press a single channel SELECT switch to change its state.

Other SELECT Switch Functions
1.) When the WINDOW switch is held, the SELECT switches open and close DAW windows as indicated on the bottom row of the LCD. The SELECT LED's lit up indicate that the window is open or foremost.
2.) When the ENABLE switch is down the fader, mute, pan, send level, send mute and plug-in automation enables will appear on the bottom row of the LCD. Press a single channel SELECT switch to change its state.
3.) When in PLUG-IN parameter mode (rotary display showing "PA"), the SELECT switches/LED's are used for plug-in switch control. A lit SELECT LED indicates that the plug-in switch parameter is on. Pressing that SELECT switch will toggle the switch parameter off.
4.) When the rotaries are in surround monitor mode (to enter surround monitor mode, press the switch next to the yellow "surrnd" LED until it lights) the SELECT switches will solo the L*R, Center, L*R Surround and Sub speaker outputs as indicated on the bottom row of the LCD.
5.) When the lower panel "default" switch is active, the SELECT switches are used to set faders to unity, their default values.

View Control Section

The VIEW control section has the Left and Right Arrow switches, BANK switch / LED and the GROUP switch / LED.

If the BANK LED is off, pressing the Right or Left Arrow switch scrolls the current view of 8 channels by 1 channel at a time.

If the BANK LED is on, pressing the Right or Left arrow switch scrolls the current view of 8 channels by 8 channels at a time. If either of these switches is held down, it will automatically repeat view changes until the switch is released.

Press the BANK switch, and the BANK LED will change state. With the BANK LED lit, view switching is 8 channels at a time, otherwise, it is 1 channel at a time.

Note that moving the View Stick horizontally exactly duplicates what the Left and Right Arrow switches do for switching banks.

GROUP switch operations

Create Groups

To create a new group, first use the channel SELECT switches to select channel to group together. Press and hold the CTRL switch on the keyboard, and then press the GROUP switch. This mimics the Command-G from the keyboard. This will bring up the ProTools Group dialog box. The next available "free" group appears with a default name (a, b, c, etc.). Either leave the default name, overwrite on, or enter a new name from the keyboard. Press ENTER to complete, or ESC to abort the process.

Suspend or Enable Groups

Press the GROUP switch, and the GROUP LED will change. With the GROUP LED lit, the groups are active. When the GROUP LED is off, the groups are inactive.

Query Groups

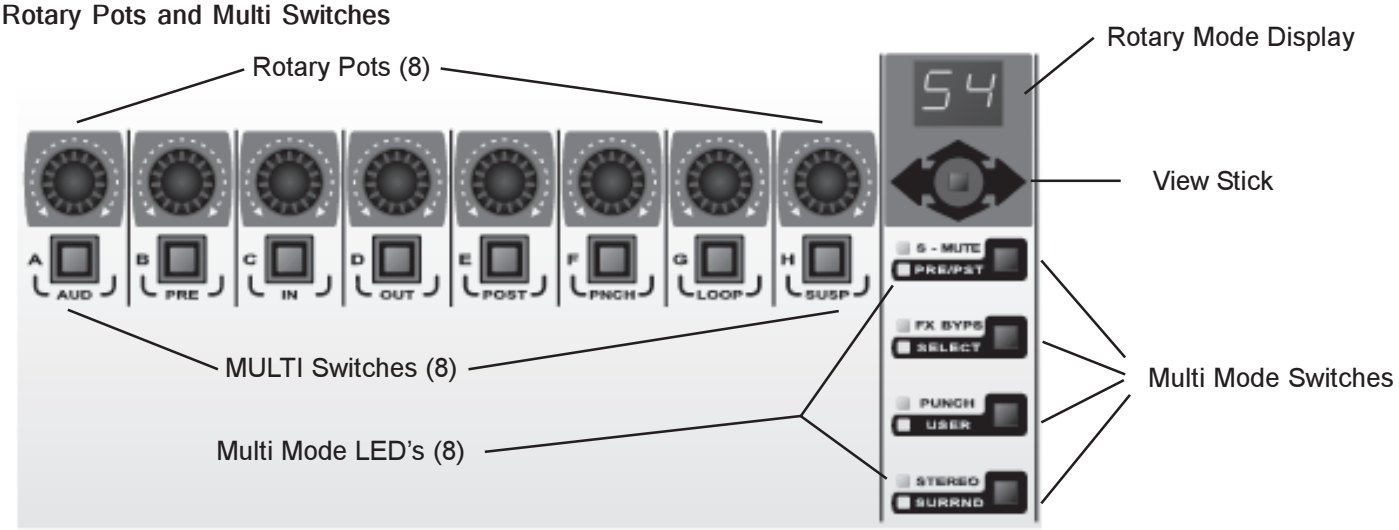
To show the Group ID, press and hold down the SHIFT switch first and then the GROUP switch, and the group ID will be displayed on the bottom row of the LCD.

Selecting Aux Sends

Press the View Stick up, and the Rotary Display will show “SA” for send A. The bottom row of the LCD will indicate channel aux level, and the pots then control the settings. Push the View Stick up, and the Rotary Display will move to “SB” for send B, “SC” for send C and so on.

When send E is selected, pushing up on the View Stick will take you back to pan. You can also move from send A back to pan by pressing down on the View Stick.

Rotary Pots and Multi Switches



This section includes the 8 endless rotary pots, the View Stick just to the right of the 8 rotaries, and the Rotary Mode Display. This is a 2 digit, 7 Segment LED character display. This section also includes the 4 Multi Mode switches, 8 Multi Mode LED’s, and the 8 MULTI switches just below the rotary pots.

Controlling Pan and Stereo Balance

When the rotary display shows “P”, the 8 rotaries are controlling channel pans. The bottom row of the LCD will indicate channel pan setting. Push in the View Stick, and the rotary display shows “Pr” to indicate that the rotaries are controlling channel pan right for stereo channels. If a channel is not stereo, the LCD lower row will be blank for that channel.

Defaulting Pans to Center

Press and hold down the DEFAULT switch (third switch up to the left of the faders) and then press any of the MULTI switches below the rotaries.

To set all channel pans to center, hold down the ALL switch (fourth switch up to the left of the faders), then press and hold down the DEFAULT switch and press any of the MULTI switches below the rotaries.

Flipping Sends to Faders

Press in on the View Stick, and the sends will be flipped to the faders to make changes there. Press the View stick a second time to return.

Send Mutes

The top Multi Mode switch toggles between S-MUTE and PRE/PST. When the S-MUTE LED is lit, the 8 MULTI Switches control the send mutes for the currently displayed send. Pressing any of the 8 MULTI switches will toggle the state of the send mute. When the LED is on, the send is muted.

Send Pre/Post

Press the top Multi Mode switch to toggle the PRE/PST LED on. When the PRE/PST LED is lit, the 8 MULTI switches control whether the send on that channel is pre or post fader. When the LED is lit, the send is pre fader.

Defaulting Sends to Unity

To quickly set a channel send to unity, press and hold down the DEFAULT switch (third switch up to the left of the faders) and press any of the MULTI switches below the rotaries.

To quickly set all channel sends to unity, press and hold down the ALL switch (fourth switch up to the left of the faders), press and hold down the DEFAULT switch and then press any of the MULTI switches below the rotaries.

Send Buss Assignment

Press and hold SHIFT on MotorMate and then press “assign” on the MotorMate lower panel. The “assign” LED will flash to show that assignment is in process. During assignment, the Burn Mode Switches and the Rotary Mode Switches are all disabled.

The Rotary Display will continue to show “Sx” for the current Send. Push the View Stick up or down to select any of the Sends for assignment.

Any SELECT LED’s that were on, now go off, and the top row of the LCD will display the input or output assignments for each channel in the current 8 channel view.

Rotate the rotary pots to move through the list of assignment choices. The choices will appear on the LCD top row as you do this. The bottom row of the LCD will show where the current selection is in the list of choices.

When the SELECT LED flashes, it indicates that the choice in that channel input or output assignment is not the original one. When any channel SELECT is flashing, you cannot switch from one Send to another with the Rotary Selector.

When the desired assignment is shown on the LCD, press that channel’s SELECT switch. That will lock in that assignment on that channel. The channel SELECT will light solid to indicate it is locked in.

At this point you can continue to make similar changes in the other 7 channels in this current view, or press the Right or Left Arrow Switches or use the View Stick to move to another view. When you are done assigning Sends, you can press the MIX or PLUG-IN Rotary Mode switches to make assignments there.

If you are done assigning altogether, either press the “assign”, ESC, or the SHIFT switch on the MotorMate lower panel. The “assign” and SHIFT LED’s will go out.

Channel In/Out Assignment

Press and hold SHIFT (on the MotorMate lower panel) and then press “assign” on the MotorMate lower panel. The “assign” LED will flash to show that assignment is in process. During assignment, the Burn Mode Switches and the Rotary Mode Switches are all disabled.

The Rotary Display will show “In” for input assignment. If you push the View Stick up, the Rotary Display will show “Ou” for Output assignment. Push the View Stick down, and the Rotary Display will go back to “In” for input assignment.

Any SELECT LED’s that were on, now go off, and the top row of the LCD will display the input or output assignments for each channel in the current 8 channel view.

Rotate the rotary pots to move through the list of assignment choices. The choices will appear on the LCD top row as you do this. The bottom row of the LCD will show where the current selection is in the list of choices.

When the SELECT LED flashes, it indicates that the choice in that channel input or output assignment is not the original one. When any channel SELECT is flashing, you can not switch from “In” to “Ou” or “Ou” to “In” with the Rotary Selector.

When the desired assignment is shown on the LCD, press that channel’s SELECT switch. That will lock in that assignment on that channel. The channel SELECT will light solid to indicate it is locked in.

At this point you can continue to make similar changes in the other 7 channels in this current view, or press the Right or Left Arrow Switches or use the View Stick to move to another view. When you are done assigning inputs or outputs, you can press the SEND, or PLUG-IN Rotary Mode switches to make assignments there. If you are done assigning altogether, either press the “assign”, ESC, or the SHIFT switch on the MotorMate lower panel. The “assign” and SHIFT LED’s will go out.

PLUG-IN Operations

Insert Control

With one of the channel SELECT LED's on, press the PLUG-IN switch (fifth switch up to the left of the faders), and the Rotary Display will display "IN" for insert. The inserts for the selected channel (controlled by the channel SELECT switches) will display on the LCD. The top row of the LCD will display "Insert 1-4 Channel label", where "Channel label" is the un-truncated name you have given the selected channel. The bottom row of the LCD will show inserts 1-4 for the selected channel. If the insert has no plug-in assigned, it will display "No Insert".

If an insert has a plug-in assigned, its name will appear (up to 10 characters long) on the bottom row of the LCD. If the plug-in name (or "No Insert") is blinking on and off, that indicates that insert is selected in the channel. If the plug-in name on the LCD has only upper case letters, then the plug-in is not bypassed. If the plug-in name contains any lower case letters, then the plug-in is bypassed. Rotate the rotary selector clockwise and insert 5 will appear on the LCD. Rotate the rotary selector counter clockwise and inserts 1-4 will appear on the LCD.

Parameter Control

To pick a plug-in for editing, press either of the 2 channel SELECT switches below the desired insert. If the plug-in is a slap delay on insert 4 (for example), the top row of the LCD will briefly show: "Page 1/2 slap delay (Ins 4)". This means that page 1 of 2 parameter pages is displayed, the plug-in is a slap delay and it is on insert 4 in the channel strip. Following this, the first 4 of the selected plug-in parameter names will appear on the bottom row of the LCD and their setting will be to the right of the parameter name.

If the parameter is a switch, the parameter name appears on the top row of the LCD with its value just to the right. The channel SELECT switches will control the switch state, and the LED will show the on/off state. If the parameter is a continuous type, the rotary pot below the parameter will change its value. *Since there are only 4 parameters displayed on MotorMate at a time, use the even numbered rotary pots to make adjustments.*

Push the View Stick up, and the LCD will briefly show "Page 2/2 slap delay (Ins 4)". This means that page 2 of 2 parameter pages is displayed, the plug-in is a slap delay and it is on insert 4 in the channel strip. Here, all the parameters on page 2 can be viewed or changed. Pushing the View Stick up goes up through the pages, and pushing it down goes down through the pages.

Plug-In Bypass

When the green "bypass" LED is lit, the MULTI switches will bypass all the inserts on the selected channel. Press the MULTI switch to toggle the bypass status of a channel's inserts. A solid lit green MULTI LED indicates that inserts 1-5 on that channel are bypassed. A blinking green MULTI LED indicates that one or more inserts (but not all) on that channel are bypassed.

Whenever MotorMate is editing a plug-in, that plug-in can be bypassed, or made active, by pressing the SHIFT switch down, then the BYPASS switch (3rd one up, left of the faders). All the session plug-ins can be bypassed or made active while the MULTI switches are in FX BYPS mode. Simply press and hold down the ALL switch and press any channel MULTI switch.

Plug In Channel Select

Press the second Multi Mode switch to light the SELECT LED. The channel MULTI switches are now used to select other channels for plug-in editing. If MotorMate was editing parameters (rotary display showing "PA"), it will return to insert mode and will select another channel for plug-in editing. The channel selected will have its track label displayed on the top row of the LCD.

If a MULTI switch is pressed quickly, twice in sucession, the next insert in the selected channel will be brought forward for editing.

Assigning Plug-In's

Press and hold SHIFT (on the MotorMate lower panel) and then press "assign" on the MotorMate lower panel. The ASSIGN LED will flash to show that assignment is in process. During assignment, the Burn Mode Switches and the Rotary Mode Switches are all disabled.
The Rotary Display will show "IN" for insert, and any SELECT LED's that were on, now go off. Rotate the rotary pots to move through the list of assignment choices. The choices will appear on the LCD bottom row as you do this. *Press the View Stick up to access insert 5 for assignment.*

When the SELECT LED flashes, it indicates that the choice in that channel input or output assignment is not the original one. When the desired assignment is shown on the LCD, press that channel's SELECT switch. That will lock in that assignment on that channel. The channel SELECT will light solid to indicate it is locked in.

Other MULTI Switch Functions

PUNCH

Press the third Multi Mode switch, and the PUNCH LED will light. The MULTI switches then will activate the functions labelled below them.

The left most 5 switches are the audition switches. These are labelled AUD (audition), PRE (pre roll), IN (edit selection start), OUT (edit selection end), and POST (post roll).

AUD
Press the AUD switch and the LED will light and the audition features of the software become active. Audition followed by combinations of PRE, IN, OUT, or POST allows the user to audition in and around an edit point. Audio playback in progress will continue until AUD is pressed again to disable it.

PRE
Press the PRE switch to play from the pre-roll point to the start of the edit selection. This mimics the option - left arrow on the keyboard.

IN
Press the IN switch to play from the start of the edit selection and play the length of the pre-roll. This mimics the command - left arrow on the keyboard.

If you press the IN switch while playing, it enters the selection IN point on the fly.

OUT
Press the “out” switch to play from the end of the edit selection and play the length of the post-roll. This mimics the option - right arrow on the keyboard.

If you press the OUT switch while playing, it enters the selection OUT point on the fly.

POST
Press the POST switch to play from the end of the edit selection and play the length of the pre-roll. This mimics the command - right arrow on the keyboard.

Press and hold ALT and OPT on the keyboard together and then press PRE or IN and play will go from the pre-roll point through the edit selection and end after the post-roll time. This mimics the command - option - left arrow on the keyboard.

Press and hold the keyboard ALT and OPT on the keyboard together and then press OUT or POST and play will go from before the edit selection end by the pre-roll amount through the edit selection and end after the post-roll time. This mimics the command - option - right arrow on the keyboard.

When audition is active, you can press any of the other audition switches and instantly go from auditioning one selection to another.

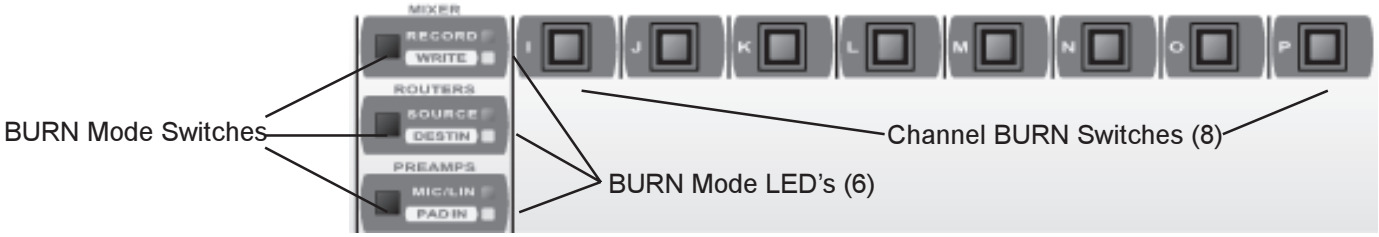
PNCH, LOOP, and SUSP
To the right of the 5 audition switches are the PNCH, LOOP and SUSP switches.

PNCH
Press the PNCH switch to enable auto punch.

LOOP
Pressing the LOOP switch will cause the edit selection to play from start to end (in to out) and then repeat continuously. To activate loop record, press and hold CTRL on the keyboard and then press LOOP.

SUSP
Press the SUSP switch, and automation playback will be suspended. When automation is suspended, the SUSP LED will blink on and off.

The Burn Section



The MotorMate BURN section includes the row of 8 switches/red LED's above the Mute and Solo switches and the 3 Burn Mode switches and 6 Burn Mode LED's to their left.

Record Operations

The Top Burn Mode Switch determines whether you are going to use the 8 BURN switches for channel record readies (labelled "record") or automation controls (labelled "write").

When the red "record" LED is lit, the 8 BURN switches operate the channel record enables. They arm the track for recording. Press a channel BURN switch and its LED flashes to indicate it is enabled for recording. When actually recording, the LED will light solid.

Press and hold the keyboard OPT switch and press any channel BURN switch, and all channel record enables will change to match the new state of the channel that was pressed. If a selection of channels has been made, press and hold the OPT switch and SHIFT switch and press any channel BURN switch, and all selected channels will be armed for recording.

Software Record Safe Mode

Channel strips can be placed into Record safe mode by holding down the SHIFT switch and ALT/FINE switches and pressing a channel Record Enable switch. The switch LED will briefly blink to indicate that the user has changed its status. There is no other indication on MotorMate that a channel has been "safe'd" in this manner. ProTools will show the record buttons as grayed out on screen in the Mix Window.

In Record safe, pressing a Record Enable switch will have no effect. Press and hold Command on the keyboard and then ALL and a Record Enable switch to clear or set safe status on all channels. Press and hold ALL then Command on the keyboard and then SHIFT and a Record Enable switch to clear or set safe status on all selected channels.
MotorMate can also be put in Record Safe mode by entering UTILITY mode. See page 26 for details.

Selecting Automation Modes. Method 1

Press the switch next to the "record" LED, and the yellow "write" LED will illuminate. This indicates that the 8 BURN switches operate the channel automation modes.

Press and hold a channel BURN switch, and the current channel automation mode will be displayed on the bottom row of the LCD. With the switch held down, rotate the rotary pot in that channel, and the mode will be changed. As you continue to rotate the pot, all the various modes will be seen on the LCD.

When the desired mode is selected, release the BURN switch. The channel BURN switch LED will remain off for Off and Read modes, and it will blink if a Touch mode is selected. Otherwise, the LED stays lit solid.

Changing Automation Modes for All Channels

Press and hold a channel BURN switch. The current channel automation mode will be displayed on the bottom row of the LCD. Then hold down the ALL switch. With both switches held down, rotate the rotary pot in that channel, and the mode will be changed on all session channels.

Selecting Automation Modes. Method 2

Press SHIFT and MODE on the lower panel of MotorMate, and it will display the automation modes for the current bank of 8 channels. You can rotate any of the rotaries to change their automation modes.

Changing Automation Modes for All Channels

Hold down the ALL switch, then rotate the rotary pot in that channel, and the mode will be changed on all session channels.

Press the ENABLE switch or SHIFT "mode" to exit.

Using the Automation Modes

First, put the BURN switches in “write” mode as described earlier. Then, enable the parameter type for automation and make sure “Suspend” is off.

Off Mode
If a channel is in “off” mode, then no automation will play on that channel, and no updates will be made to the automation on that channel.

Read Mode
If a channel is in “read” mode, then automation will play on that channel, but no updates will be made to the automation on that channel.

Touch Mode
If a channel is in “touch” mode, rotate the channel rotary pot, and the parameter change will be punched in. If you stop moving the pot, it will drop back after the touch time-out has elapsed (set as an automation preference in software).

Latch Mode
If a channel is in “latch” mode, you can either rotate the channel rotary or press the channel BURN switch to punch in an automation move.

Write mode
If a channel is in “write” mode, any parameter change made during play will be updated until play is stopped.

Automation Enables

Press and hold the ENABLE, and the LCD will display “FADR MUTE PAN SEND SENDM PLUG-IN SUSP”.

The SELECT LED’s will show the current state for these enables, and the SELECT switches toggle them on and off.

Enable Fader Automation
If the FADR LED is on, then fader level changes will be updated in the automation.

Enable Mute Automation
If the MUTE LED is on, then mute changes will be updated in the automation.

Enable Pan Automation
If the PAN LED is on, then pan setting changes will be updated in the automation.

Enable Send Level Automation
If the SEND LED is on, then send level changes will be updated in the automation.

Enable Send Mute Automation
If the SENDM is on, then send mute changes will be updated in the automation.

Enable Plug In Automation
If the PLUG-IN is on, then plug-in parameter changes will be updated in the automation if the particular plug-in parameter has been automation enabled in the plug-in window.

Automation Suspend

If the SUSP led is blinking, then automation playback and updating has been disabled globally. This switch duplicates the function of the “susp” switch in the PUNCH mode for the MULTI row of switches on MotorMate. All channel mixer settings are left in their current state and the channel automation mode is unchanged, but “dormant”.

MUTE and SOLO

These switches activate the DAW console mute and solo functions. The LED's in these switches reflect the mute and solo state of the DAW console. Additionally, press and hold the OPT switch and either a MUTE or SOLO switch to clear or set all mutes or solos on the console. Press and hold the OPT switch and SHIFT switch and either a MUTE or SOLO switch to clear or set all selected channels mutes or solos on the console.

In ProTools, there are several preferences you can set for solo and mute operation. These are Solo Latch, Solo Safe, Solo follows Mix Groups, and Mute follows Mix Groups. MotorMate will act and be updated in a manner consistent with screen mute and solo functions for each of these preferences. When a Mute or Solo is on, the LED lights solid. Solo'ed channels will flash the LED's on Mute switches that are not actually muted. The Mute LED's on channels that are actually muted will be lit solid.

Solo Safe Mode

Channel strips can be placed into Solo safe mode by holding the ALT switch and pressing a channel Solo switch. The switch LED will briefly blink to indicate that the user has changed its status. There is no other indication on MotorMate that a channel has been "safe'd" in this manner. ProTools will show the solo button as grayed out on screen in the Mix Window.

In Solo safe, pressing a Solo switch will have no effect. Press and hold Command on the keyboard and then ALL and a Solo switch to clear or set safe status on all channels. Press and hold ALL then Command on the keyboard and then SHIFT and a Solo switch to clear or set safe status on all selected channels.

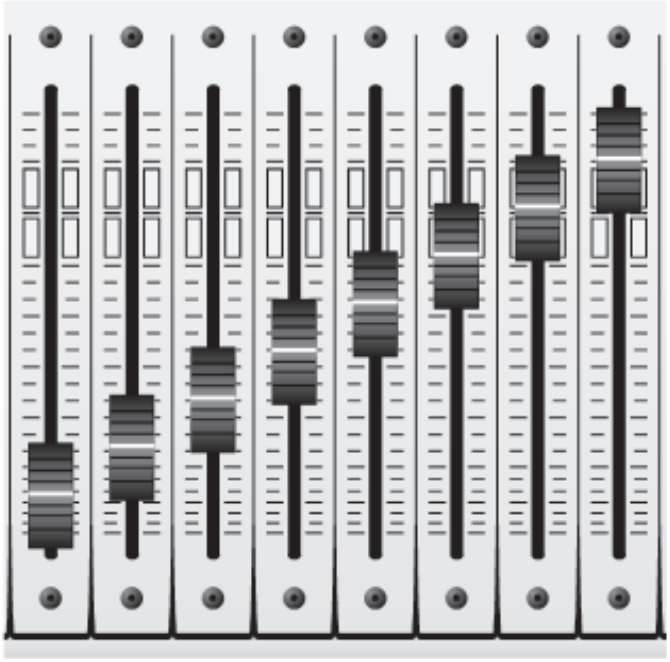
Faders

Setting Mix Levels

The faders are used for setting mix levels. They are motorized, so when automation is playing back, they will move to reflect the actual mix levels. When you touch the fader knob, the motor is disengaged to allow you to make changes without fighting the motor.

Setting Aux Levels with the Faders (Fader Flip)

With the rotaries in send mode, press in the View Stick, and the aux levels will be flipped down to the faders so you can make your send level changes on them. The upper row of the LCD will display the send buss assignments.



Press in the View Stick again to return the faders to controlling the mix levels.

Viewing the Fader Levels in dB

Press and hold SHIFT and ALT/FINE together and touch a fader knob, and then the mix level will appear on the lower row of the LCD in dB's as you move the fader, the values will appear on the LCD.

Defaulting a Fader to Unity

Press and hold the DEFAULT switch and then press a channel SELECT switch, and the fader will move to unity.

Defaulting all Faders to Unity

Press and hold the ALL switch first, then press and hold the DEFAULT switch. Pressing any channel SELECT switch will move all the faders in the session to unity.

Time Code Display

The Time Code display has eight 7-segment LED numeric displays and 3 mode LED's to the left of the display. These mode LED's indicate the current time display format.

"t.c." LED on = Timecode display format:
HOURS:MINUTES:SECONDS:FRAMES

"feet" LED on = Timecode display format:
FEET:FRAMES

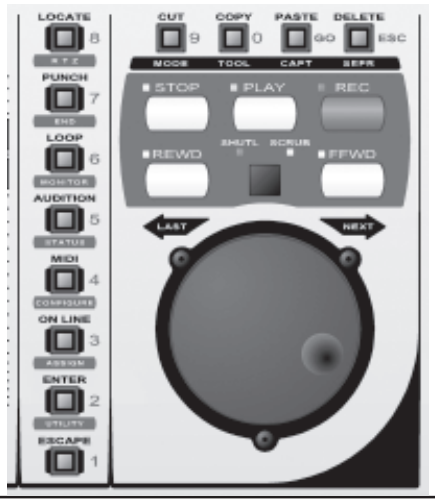
"beats" LED on = Timecode display format:
BARS:BEATS

no LED on = Timecode display format:
MINUTES:SECONDS
or
SAMPLES

The display uses periods as delimiters. The timecode display mode is set in ProTools from the big counter window. Some time displays, such as MINUTES:SECONDS have a least significant digit display in thousandths of a second (three characters). These values will be displayed with 2 digit accuracy. The right most period blinks on and off when MotorMate is on-line.

Transport Switches

These switches activate the DAW basic transport functions. The Rewind and Fast Forward switches can be either Momentary or Latching types. See Page 26 under UTILITY mode for details



Adding Locate Points to Memory

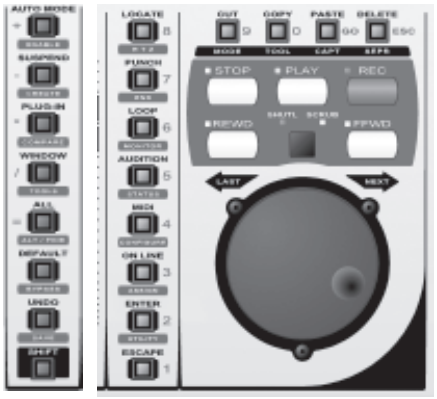
Locate points can be entered to memory by pressing ENTER as the transport is running (it uses the next free location). Press ENTER a second time to add the point to the list, or press ESC to cancel without entering it.

Next and Last Locate

Press and hold the SHIFT switch, and the FFWD and REWD switches move the transport to the next or last locate point in the locate window.

Locate Mode

Press the LOCATE switch, the software locate list will open on screen, and the LOCATE and ESC LED's will begin to flash indicating that locate mode is active. When locate mode is on, the labels in grey beside the lower panel switches indicate their use. Pressing one or two number switches followed by GO recalls a memory position. Press ESC (in grey next to the DELETE switch) to exit locate mode, and the on screen locate list will disappear. *If you want to exit locate, but leave the locate list on-screen, hold down SHIFT as you pres ESC.*



Enter Pre Roll, In, Out, or Post Roll. Method 1

The MULTI switches must first be in PUNCH mode by pressing the Multi Mode switch labelled PUNCH switch so the PUNCH LED is on.

Press and hold SHIFT and ALL together then press either PRE, IN, OUT, or POST or POST. The PRE, IN, OUT, or POST LED will blink then to indicate that you are editing that value.

The current time will be displayed on the MotorMate timecode display, and the current edit field will blink on and off.

Use the Navigation controls to edit the values. Both the Zoom Stick horizontal and Left and Right navigation switches control which field is being edited. As you move the Zoom Stick left or right or press the Left or Right navigation switches, the edit field will change, and the timecode display will blink on and off the current field to be edited.

Both the Zoom Stick vertical and Up and Down navigation switches edit the currently selected field. As you move the Zoom Stick up or down or press the Up or Down navigation switches, the value will change, and the timecode display will show the value as it changes.

You can revert to the old values and exit by pressing the ESC switch on MotorMate. You can save the new values and exit by pressing the ENTER switch on MotorMate.

Enter Pre Roll, In, Out, or Post Roll. Method 2

The MULTI switches must first be in PUNCH mode by pressing the Multi Mode switch labelled PUNCH so the PUNCH LED is on.

Press and hold SHIFT and ALL together then press either PRE, IN, OUT, or POST or POST. The PRE, IN, OUT, or POST LED will blink then to indicate that you are editing that value.

The current time will be displayed on the MotorMate timecode display, and the current edit field will blink on and off. MotorMate will also open the transport window if it is not already open.

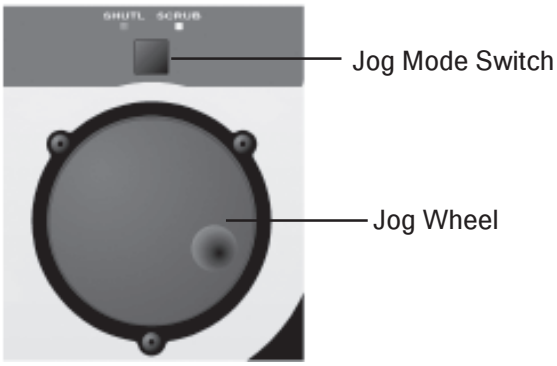
Press the LOCATE switch and you can enter the values on the numeric switches. Use the GO switch to tab to a field for editing. As you press the GO switch, the edit field will change, and the timecode display will blink on and off the current field to be edited.

You can revert to the old values and exit by holding down SHIFT and pressing the ESC switch on MotorMate. You can save the new values and exit by holding down SHIFT and pressing the ENTER switch on MotorMate. MotorMate will also close the transport window if it is was already open.

Entering Values into the Big Counter

Press LOCATE on MotorMate. Then press the "=" switch (the ALL switch) and you can enter values into the big counter by the same two methods just described.

Scrub and Shuttle Controls



When scrub or shuttle are engaged, only certain of the controls on MotorMate will remain active:
1.) Jog wheel and Jog select switch.
2.) Transport switches (which cause shuttle or scrub to disengage).
3.) Channel faders, Mutes, or Solos.

Scrub

Press the Jog Mode switch just above the jog wheel. The SCRUB LED will light to show that it is in scrub mode. When scrub is engaged, rotating the jog wheel will scrub play whatever tracks are selected by the edit cursor.

Scrubbing with the SHIFT switch down will make a region selection.

Fine Scrubbing

Rotate the jog wheel in scrub mode with the ALL switch held down, and fine scrubbing will occur.

Scrubbing with the SHIFT and ALL switch down will make a region selection while fine scrubbing.

Shuttle

Press and hold SHIFT, and then press the Jog Mode switch to enter shuttle. The SHUTTLE LED will light to show that it is in shuttle mode.

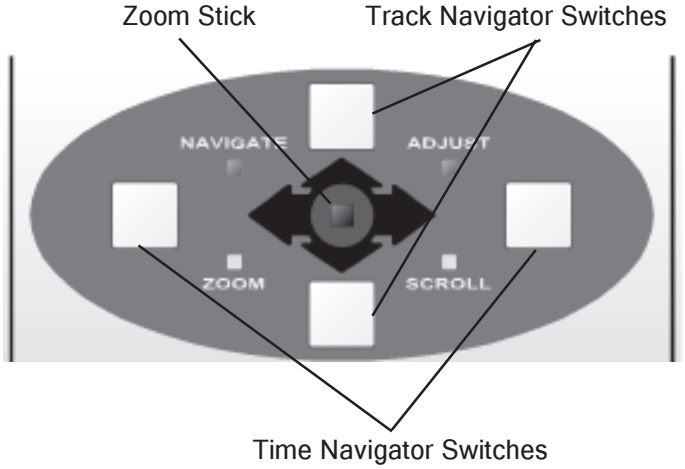
In shuttle mode, rotating the wheel clockwise from center shuttles forward at high speed and the F FWD and PLAY LED's will light. In like manner, rotating the wheel counter clockwise from center shuttles the transport backward at high speed and the REW and PLAY LED's will light.

The speed of shuttling is determined by how far the wheel is rotated from its center point. Press any transport switch to exit shuttle mode.

Additionally, shuttling with the SHIFT switch down will make a region selection.

Zoom and Navigator Section

This section has 2 Track Navigator switches and 2 Time Navigator Switches, and the Zoom Stick at the center. The 4 mode LED's are labelled "navigate", "zoom", "scroll" and "adjust".



Zoom Stick

Moving the Zoom Stick horizontally controls the expansion or contraction of the horizontal (or time) axis in the edit window. Moving the Zoom Stick to the left contracts the time line, and moving it to the right expands the time line.

Moving the Zoom Stick vertically controls the expansion or contraction of the vertical (or amplitude) axis in the edit window. Moving the Zoom Stick up expands the waveform, and moving it down contracts the waveform.

When the Zoom Stick is moved horizontally or vertically, the ZOOM LED lights to show that zooming is taking place. *If none of the ZOOM LED's are on, then press any control in the Zoom and Navigator section, and the Software will update them properly.*

Pressing in on the Zoom Stick toggles between the 2 Navigate modes which are Navigate and Adjust.

Track and Time Navigator Switches

Navigate Mode

When the NAVIGATE LED is lit, the Navigate switches are in Navigate mode. Pressing the Track Navigator switches moves the edit cursor up and down tracks in the edit window. *Press and hold SHIFT first, and then these switches will add or subtract tracks to the cursor.*

Pressing the Time Navigator switches moves the edit cursor to the previous or next region boundary or sync point. *Press and hold SHIFT first, and then these switches will select regions forward or backward.*

Press and hold the ALL switch, and then either of the Time Navigator switches will center the currently selected region in the edit window.

Adjust Mode

Press in on the Zoom Stick to toggle to Adjust mode. The ADJUST LED will light.

Adjust Start of Edit Region

Press and hold the left Time Navigator switch and rotate the Jog wheel.

Adjust End of Edit Region

Press and hold the right Time Navigator switch and rotate the Jog wheel.

Adjust Region Position Retaining its Length

Press and hold both the left and right Time Navigator switches and rotate the Jog wheel.

Changing or Adding Tracks to Selection

Pressing the Track Navigator switches moves the edit cursor up and down tracks in the edit window.
Press and hold SHIFT first, and then these switches will add or subtract tracks to the cursor.

Clipboard Switches

CUT, COPY, PASTE, DELETE

These 4 switches each have secondary functions as well. *When the SHIFT switch is held down these become MODE, TOOL, CAPT, and SEPR controls.*

CUT

Pressing the CUT switch removes the currently selected edit region and places it in the clipboard.

COPY

Pressing the COPY switch makes a copy of the currently selected edit region and places it in the clipboard.

PASTE

Pressing the PASTE switch takes the clipboard contents and copies it to the selected tracks beginning at the edit cursor location.

DELETE

Pressing the DELETE switch removes the currently selected edit region, but does not place it in the clipboard.

MODE

Press and hold SHIFT, then press the MODE switch to cycle through the 4 edit modes: Shuffle, Slip, Spot, and Grid. These modes are described in detail in the Pro-Tools owners manual.

TOOL

Press and hold SHIFT, then press the TOOL switch to cycle through the 6 edit tools: Zoom, Scrub, Trim, Select, Grab, Pencil. These tools are described in detail in the ProTools owners manual.

CAPTURE

Press and hold SHIFT, then press the CAPTURE switch. This will define a selection as a new region and add it to the Regions List.

SEPARATE

Press and hold SHIFT, then press the SEPERATE switch. This will define a selection within an existing region and separates it from adjacent material.

SHIFT

Generally speaking, SHIFT is used to add things to a selection of controls, channels, or tracks. For example, press and hold SHIFT down and then press several channel SELECT switches. All the SELECT switches that were pressed will then have their LED's lit to show that they are all selected. You could think of the SHIFT switch as the SHIFT/add switch.

Additionally, holding down the SHIFT switch will cause the bottom row of the LCD to display audio meters for the 8 currently viewed channels.

The SHIFT switch must be held down to access any of the functions labeled below the switches.

UNDO

When this LED is lit, it means that the current session has been changed in some way and that the undo option is available. Press the UNDO switch to undo the last edit operation. If the UNDO LED remains lit, it means that more "undo's" are needed to return to the original state. Press the UNDO switch to continue undoing. If the UNDO LED goes off, then the session is unaltered. When this LED is blinking, it means that the redo option is available. Press the UNDO switch to redo the last edit operation.

SAVE

When this LED is lit, it means that the current session has been changed in some way. Press the SAVE switch, and the SAVE LED will flash as if to ask "are you sure?" Press the SAVE switch a second time to save the session file. The SAVE LED will turn off. While the SAVE LED is flashing, you can press the ESC switch to abort the save, and the SAVE LED will light solid again.

DEFAULT

When the lower panel "default" switch is active, the SELECT switches are used to set faders, pans and sends to their default values.

BYPASS
While in Plug-in mode and displaying inserts, press and hold SHIFT and BYPASS. Then press one of the channel SELECT switches to bypass that plug-in.

ALL
The ALL switch is used to make changes to all channels. For example, press and hold the ALL switch and press a channel SELECT switch and all the channels will be selected.

ALT/FINE
This switch is used for many things including:

PAN
Pressing SHIFT and ALT/FINE down while rotating a pan pot will display its value numerically from -100 to +100 on the top row of the LCD.

SEND
Pressing SHIFT and ALT/FINE down while rotating a send pot will display its value numerically from off to +6dB on the top row of the LCD.

FADERS
Pressing SHIFT and ALT/FINE down while touching or moving a fader will display its value numerically from off to +6dB on the top row of the LCD.

SCRUB
Pressing SHIFT and ALT/FINE down while scrubbing will cause fine scrubbing.

WINDOW
Press and hold the WINDOW switch and its LED lights up and the LCD display shows the various window names, and the LED's on the SELECT switches show the status of the windows. Press the SELECT switch under "MIX" to bring the Mix window to the foreground. Press the SELECT switch under "EDIT" to bring the Edit window to the foreground.

TOOLS
Pressing SHIFT and TOOLS will cycle through the edit tools.

PLUG-IN
If both the "bypass" and "select" LED's are off, press the PLUG-IN switch. The Rotary Display will display either "IN" for insert, or "PA" for parameter. Simultaneously, MotorMate will open the currently selected plug-in. If none is selected, See Page 16 for Plug-in operation.

COMPARE
This switch will allow the comparison of the present plug-in parameter settings to the previous settings.

SUSPEND

Press the "SUSPEND" switch to globally suspend playback and recording of automation. The LED will blink. Press again to globally reactivate playback and recording of automation.

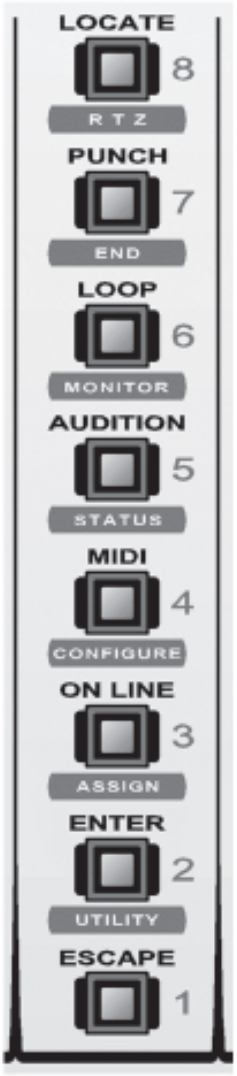
CREATE
The CREATE switch is used to create groups. First use the SELECT switches below the LCD to select a channel to include in a group. Press and hold the SHIFT switch . Press more select switches to add channels. With SHIFT still down press the CREATE switch and the Pro Tools Group dialog box will appear. Press the ENTER switch on MotorMix to complete the process or ESC to exit without grouping.

The GROUP switch and LED under the VIEW section on MotorMix are used to enable/ disable groups. If the LED is lit, the groups are enabled. With groups enabled, press and hold the SHIFT switch then hold the GROUP switch down. The top row of the LCD will show the channel group assignments.

ENABLE
Press and hold the ENABLE, and the LCD will display "FADR MUTE PAN SEND SENDM PLUG IN SUSP". The SELECT LED's will show the current state for these enables, and the SELECT switches toggle them on and off.

MODE
Press SHIFT and MODE on the lower panel of MotorMate, and it will display the automation modes for the current bank of 8 channels. You can rotate any of the rotaries to change their automation modes.

Reset MotorMate
To reset MotorMate, press SHIFT, UNDO, and ENABLE at the same time.



ESC
The ESC (escape) switch is used to exit processes without keeping the result. It is context sensitive.

ENTER
The ENTER switch is used to complete processes and to enter locate points on the fly.

UTILITY
Press and hold SHIFT and then press UTILITY. Release the SHIFT switch.

The LCD will display the Record Safe state, Latching or Momentary states for the Rewind (REWD) and Fast Forward (FFWD) switches, and the Motors ON/OFF status.

Record Safe
When the Record Safe is ON, the Master Record Switch and the channel BURN switches (when in rec/rdy mode) will be locked out.

Press SELECT 1 or SELECT 2 to change the state. *The new state will NOT be stored in nonvolatile memory, so Record Safe will be OFF at power up.*

REWD and FFWD options
When these switches are in Momentary mode, the FFWD or REWD switches must be held down to keep the transport rewinding or fast forwarding. When these switches are in Latching mode, the FFWD or REWD switches must be pressed once to start the transport rewinding or fast forwarding, and pressed again to stop.

Press SELECT 4 or SELECT 5 to change the state. *The new state will be stored in nonvolatile memory, so it will be remembered at power up.*

Motors ON/OFF
When the Motors are ON, the faders will move whenever the Software tells them to move. When the Motors are OFF, the faders will not move.

Press SELECT 7 or SELECT 8 to change the state. *The new state will NOT be stored in nonvolatile memory, so the motors will be ON at power up.*

ON LINE
The ON LINE switch controls punch-in/out behavior.

If you are not on line, recording begins and stops whenever you press the Record switch, regardless of the selections start or end point. *If you are on line, punch-in/out occurs only within the selection.*

ASSIGN
The ASSIGN switch is used for making channel input/output assignments, send buss assignments, and plug in assignments.

MIDI
As of this writing, this is unimplemented and is reserved for future use.

CONFIGURE
As of this writing, this is unimplemented and is reserved for future use.

AUDITION
Press the AUDITION switch and the LED will light and the audition features of the software become active. Audition followed by combinations of PRE, IN, OUT, or POST allows the user to audition in and around an edit point. Audio playback in progress will continue until AUD is pressed again to disable it. *This switch is a duplicate of the MULTI switch 1 when in PUNCH mode.*

STATUS
Press STATUS, and the system status window will open or close.

LOOP
Pressing the LOOP switch will cause the edit selection to play from start to end (in to out) and then repeat continuously. To activate loop record, press and hold CTRL on the keyboard and then press LOOP. *This switch is a duplicate of MULTI switch 7 when in PUNCH mode.*

MONITOR
Hold down SHIFT and press MONITOR to clear the peak and last held channel meters.

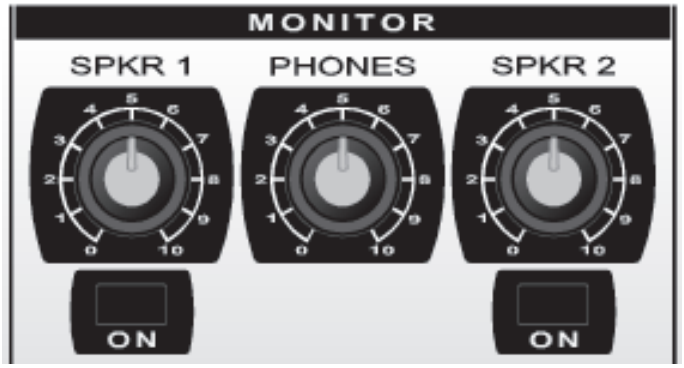
PUNCH
Press the PUNCH switch to enable auto punch. *This switch is a duplicate of MULTI switch 6 when in PUNCH mode.*

END
Press END and the play pointer will move to the end of the session time line.

LOCATE
Press the LOCATE switch, and the LOCATE and ESC LED's will begin to flash indicating that locate mode is active. When locate mode is on, the labels in grey beside the lower panel switches indicate their use.
Pressing one or two number switches followed by GO recalls a memory position. Press ESC (in grey next to the DELETE switch) to exit locate mode.

RTZ (Return to Zero)
Press RTZ and the play pointer will move to the start of the session time line.

Monitor Section
The monitor section has 3 rotary pots and 2 switches to control 2 sets of speakers and a front panel headphone jack.



Typically, you would have the Speaker 1 outputs on the MIM connected to your main control room speakers and the Speaker 2 outputs on the MIM connected to your auxiliary control room speakers or to speakers in the studio or overdub room.

Monitor Interface Module (MIM)

The Speaker 1 pot controls the volume of the speakers fed from the Speaker 1 outputs on the MIM, and the switch just below the pot turns the speaker on and off. This switch is convenient to turn off the main control room speakers and use the headphones if you track from the control room .

The Speaker 2 pot controls the volume of the speakers fed from the Speaker 3 outputs on the MIM, and the switch just below the pot turns the speaker on and off. This switch is convenient to turn off the auxiliary control room speakers or studio speakers during tracking over-dubs.

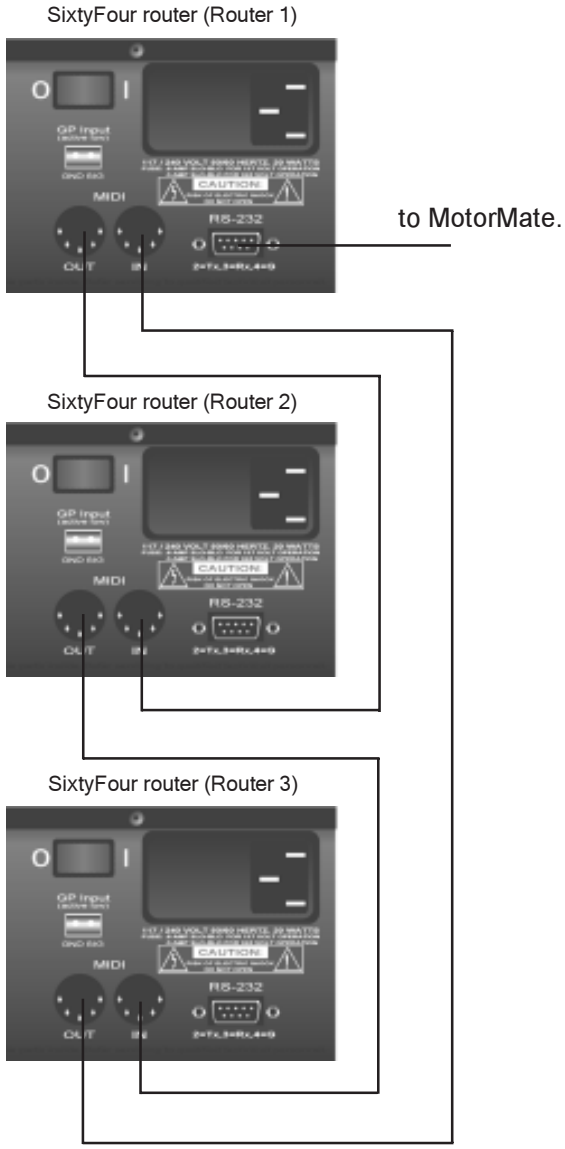
The Phones pot controls the volume of the headphone jack on the front edge of MotorMate.

Installation and Connections

RS-232 Connections
Use a CM Labs CAB912 cable or a standard 9 pin male to female cable. The cable has a 1 to 1 pinout. Connect the cable from the MotorMate rear panel RS-232 connector to the RS-232 connector on the CM Labs SixtyFour Studio Router. If you are using only 1 SixtyFour Router, move on to the Audio Connections section.

If using more than 1 SixtyFour Router, connect the MIDI output of Router 1 to the MIDI input of Router 2 and so on in a "daisy chain" as shown in the diagram below. Connect the MIDI output of the last Router in the chain to the MIDI input of Router 1.

MotorMate will control all 3 Routers over the single RS-232 connection.



After you have connected one or more SixtyFours to MotorMate, you must check to see that each one is set to SLAVE mode.

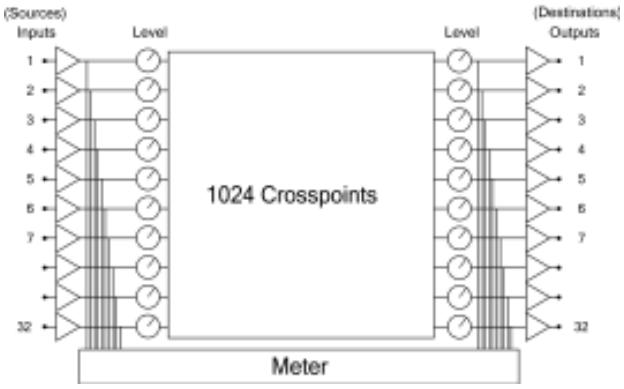
Step 1.) With the SixtyFour unlocked (Save and Route LED's not blinking) push in the Level and Meter switches on the SixtyFour to enter Utility mode.

Step2.) Push in the SixtyFour Encoder twice, and the master/slave status appears. It shows as either NST (master) or SLV (slave) in numeric display. Simply turn the rotary control knob until it shows SLV (slave).

Step 3.) Push in the Level and Meter switches on the SixtyFour to exit Utility mode.

Repeat steps 1 through 3 for any additional SixtyFours present.

Audio Connections
The SixtyFour rear panel has 4 DB25 connectors for the 32 Source inputs and 4 DB25 connectors for the 32 Destination outputs. Mono, Stereo, Surround or other multi channel devices can be interfaced.



SixtyFour Audio Block Diagram

Connect the audio outputs of external devices to the Source Inputs on the SixtyFour. Connect the SixtyFour's Destination Outputs to the inputs of external devices. You may connect your audio devices to the SixtyFour by several methods.

Devices equipped with DB25 connectors:
Use standard DB25 to DB25 audio snakes. Connect the snake to the SixtyFour rear panel and tighten the screws included with the snakes. Connect the other end to the DB25 equipped device and tighten the screws.

There are two ways to connect devices equipped with XLR or 1/4" phone jacks:

1.) The CM Labs DB-8 terminal strip adaptor. Wire up the DB-8 up according to the pin connections given on it.

2.) Use standard DB25 to 1/4" or XLR audio snakes. Connect the DB25 end of the snake to the SixtyFour rear panel and tighten the screws included with the snakes. Connect the individual connector end of the snake to the 1/4" or XLR connectors on the external device.

Mono Connections
Mono Sources or Destinations may be connected to any of the 32 inputs or 32 outputs on the SixtyFour.

Stereo Connections
Stereo Sources or Destinations may also be connected to the 32 inputs or 32 outputs on the SixtyFour. Left and Right connections must be on adjacent channels on the SixtyFour (i.e. 12 and 13).

The Left channel of a device must be connected to the lower of the 2 channel numbers on the SixtyFour. Additionally, Source or Destination 15 cannot be a Left Channel. After Stereo devices are connected, you must define them for the SixtyFour so it will know how to deal with them. Consult the SixtyFour owners manual to learn about defining Stereo channels in the SixtyFour's Utility Mode.

Multi Channel and Surround Connections
Surround or other multi channel source devices such as discreet stem mixes or decoder outputs are connected to the Source Inputs on the SixtyFour. We recommend (but it is not necessary) using adjacent Source Inputs on the SixtyFour (like 8, 9, 10, 11, 12, 13 for example) to connect Sources.

Destination Outputs of the SixtyFour are connected to drive the Surround Encoder inputs or speaker amplifier inputs. Destination connections must be on adjacent channels on the SixtyFour (like 8, 9, 10, 11, 12, 13 for example). It is necessary to Label the Surround Destinations according to the convention in the "Creating LCD Channel Labels" section later in this appendix.

Operations Overview

Accessing the SixtyFour from MotorMate

Press the middle Burn Mode switch on MotorMate labelled ROUTERS, and the "source" LED will light. If no SixtyFour's are present, the LCD will say " No SixtyFour Router Present ".

If one or more SixtyFours are present, the 8 SELECT switches and the 8 BURN switches will be used to control signal routing, track naming, and many other operations.

The 2 digit Rotary Mode display and View Stick provides memory access to the SixtyFour's 90 internal memories for recall, save and undo operations.

The 8 Rotary Pots control the 32 Source levels or the 32 Destination levels or stereo Destination balance settings.

The top row of the LCD will display either Source or Destination labels for the current bank of 8 channels. The bottom row of the LCD shows 8 Source or Destination level settings from -96dB to +10 dB.

The VIEW and BANK switches operate just as they did for mixing, except that they are controlling only the SixtyFour view. If the BANK LED is lit, then the view changes by 8 channels at a time, otherwise the view changes by 1 channel at a time. Horizontal input on the View Stick duplicates the left and right VIEW switches.

You can also go directly to a bank by pressing and holding down the SHIFT switch and then press a channel SELECT switch from 1 to 4.

With SHIFT held down:
SELECT 1 moves to Sources / Destinations 1 to 8.
SELECT 2 moves to Sources / Destinations 9 to 16.
SELECT 3 moves to Sources / Destinations 17 to 24.
SELECT 4 moves to Sources / Destinations 25 to 32.

Pressing the View Stick up or down also toggles between "source" and "destin" just like the second Burn Mode switch (ROUTERS).

The red “source” LED indicates that the channel BURN switches are the Source selectors for the SixtyFour. Press any of the 8 BURN switches and its LED will light to show that a source has been selected. The Source Labels will appear on the top row of the LCD, and the Source level will be on the bottom row.

Press the ROUTERS switch again and the yellow “destin” LED will light. Now you are dealing with the destination outputs on the SixtyFour.

The top row of the LCD will display the Destination labels. The bottom row of the LCD shows the Destination level settings. Stereo Destinations will show level and stereo balance from Left 99 to Right 99. The 8 rotary pots now control the destination levels and stereo balances. *Any Destinations that are routed to the previously selected Source will light to show that they are routed to that Source.*

When the “source” or “destin” Burn Mode LED’s are on, the upper panel of MotorMate no longer controls the DAW, although the channel Mute and Solo switches still control the DAW.

The lower panel of MotorMate continues to operate the DAW as normal except for the SHIFT, DEFAULT, SAVE, ON LINE, ENT and ESC. These exceptions are described later.

To exit SixtyFour operations, and return the upper panel to DAW operations, press the MIXER, PREAMPS or the STEREO/SURRND switch. If there are any pending operations on the SixtyFour, they must be completed before exiting.

Creating LCD Channel Labels
Whenever the “source” or “destin” LED’s are lit, the Sixty Four Source or Destination labels appear on the top row of the LCD on MotorMate. These labels are stored inside each SixtyFour device. The SixtyFour comes with Source labels already defined as Source 01, Source 02 etc. The Destination labels already defined as Destin 01, Destin 02 etc. Each label is 10 characters long.

Viewing Un-truncated labels
The LCD shows the first 2 and last 2 characters of each label. Press and hold any channel SELECT switch (just below the LCD) on MotorMate, and all 10 characters of that channel will appear on the top row of the LCD.

Editing Labels
To edit a label, first press and hold down the ON LINE switch on MotorMate and then press a SELECT switch to begin editing that label. Its label will appear on the top row of the LCD. Use the upper panel switches to enter the desired name. *The left and right View switches move the edit cursor, and the decimal point switch (MUTE switch on channel 8) functions as a space key.* To capitalize a letter, press SHIFT down first.

You can also access a pre defined device list by pressing the View Stick up or down.

To abort the edit, press the ESC switch or press ENT switch to save the label inside the SixtyFour.

Mono Source and Destination Labels
These can be labelled any way you like, but remember that most of the time they will be truncated on the LCD, so make your selection accordingly.

Stereo Source and Destination Labels
Use the same name for the left and right channels of a stereo pair, but add a /L (a slash and a capital L) as the last two characters for the left channel, and a /R (a slash and a capital R) as the last two characters for the right channel.
Note that you must also define Left and Right pairs in the SixtyFour utility mode as defined in the SixtyFour owners manual.

Surround Destination Labels
The Surround outputs on the SixtyFour should be set up in the following order: Left channel, Right channel, Center channel, Left Rear channel, Right Rear channel and Subwoofer channel. They must be on adjacent Destination outputs on the SixtyFour. For example Destination outputs 22, 23, 24, 25, 26 ,27 could be the 6 surround channels.

You can assign all 6 labels automatically by the following procedure. Assume that you want to assign your surround outputs to be on Destinations 25, 26, 27, 28, 29 30.

Step 1. Press the ROUTERS: switch until the “destin” LED is lit.

Step 2. Press the “VIEW” switches until Destination 25 (shown as DE25) is on the LCD.

Step 3. Press and hold down the “ON LINE” switch on MotorMate and then press the SELECT switch just under Destination 25.

You will now see this on the LCD:

```
-- DESTIN  25 -- Use Alpha Keys to Edit
   Press ENTER to Save or ESC to exit.
```

Step 4. Press the View Stick down once and you will see the following:

```
-- *SURROUND* -- Assign 5.1 Speaker set?
   Press ENTER to Save or ESC to exit.
```

Step 5. Press “ENTER” on MotorMate, and the Surround outputs will be labelled and assigned:

Destin 25	Left	*S
Destin 26	Right	*S
Destin 27	Center	*S
Destin 28	LRear	*S
Destin 29	RRear	*S
Destin 30	Sub	*S

*You can enter your own labels for the Surround outputs, but they must be in the order listed above, and you must use an *S (an asterisk and a capital S) as the last two characters for the Destination labels of a Surround device.*

It is this *S that lets MotorMate know that a Surround device is being sourced from the SixtyFour. When Surround Monitor mode is selected on MotorMate it will know how to deal automatically with the outputs.

Memory Operations

Each SixtyFour router has 90 user memories to store Source and Destination routing and levels. Whenever a SixtyFour router is on line, the 2 digit rotary mode display on MotorMate shows the current memory selected on the SixtyFour. This number also appears on the SixtyFour display.

Recall

Push in the View Stick and the Memory display will flash on and off. While it is flashing, push the View Stick up or down to scroll to new memories. As the new memory numbers appear the settings of that memory are “previewed” on MotorMate.

The memory is not recalled until the View Stick is pushed in again. *The levels are previewed on the lower row of the LCD. If the “destin” LED is on, the channel BURN LED’s preview routing to the currently selected source.* The BURN LED’s light if they are routed to the selected source. The LED’s will be off if they are not routed to the selected source.

When the memory number is flashing, push in the View Stick to recall a memory. If you wait 5 seconds, the previous memory number will appear and no recall occurs.

Save

The decimal point on the 2 digit Rotary Display will blink on and off whenever the current settings of the SixtyFour have been altered and are not the same as the current memory. The far right decimal point also blinks on the SixtyFour under these conditions. To save the settings, press the SAVE switch on MotorMate, and push up or down the XYZ View stick to select a location to store the setting.

```
** Save to Memory     ?  SAVE to Store
Stick Up or Down to Change, ESC to exit
```

Press SAVE again to store them, or press ESC or push in the Rotary Selector to exit without saving.

Undo

The decimal point on the 2 digit Rotary Display blinks on and off whenever the current settings of the SixtyFour have been altered and are not the same as the current memory. To undo the changes, push in the View Stick. When the memory number begins to flash, push in the View Stick a second time, and the original memory will be recalled and the decimal point will stop flashing.

Source Controls

Source Selection Operations

Mono Source Selection
When the “source” LED is lit, use the channel BURN switches to select sources for routing. If the selected Source is Mono, the channel BURN LED will illuminate to show that it is selected. The Source level in dB will be displayed below each source label.

Stereo Source Selection
Press either channel BURN switch of a stereo Source to select it for routing. Both channel BURN LED’s will illuminate to show that it is selected. *Note that Stereo pairs must be defined in the SixtyFour’s utility mode as described in its owners manual.* For Stereo Sources, the level will be displayed below the left channel label. The area below the right channel will be blank.

Source Level Control Operations

Setting Source Levels
Rotate a channel rotary pot to change a Source level. Source levels can be changed independently of which source is selected. Stereo Sources have their level displayed under the left channel label. The right channel is blank.

Setting Levels to Unity
Press and hold the “DEFAULT” switch. Press any channel SELECT switch, and the Source level will jump to unity.

Setting Levels to Off
Press and hold the ALL switch and then press any channel SELECT switch, and the Source level will jump to off.

Destination Controls

Destination Routing Operations

Routing Mono Sources to Mono, Stereo Destinations
With the BURN switches in “source” mode, press a BURN switch for the desired mono source that you want to route. Press the ROUTERS switch to light the “destin” LED. The channel BURN LED’s will light if they are routed to the selected source. To route or unroute destinations, press a channel BURN switch. If the Destination is stereo, both BURN LED’s light to show that it is routed to the mono source.

Routing Stereo Sources to Stereo Destinations
With the BURN switches in “source” mode, press the BURN switch for the desired stereo source that you want to route. Press the ROUTERS switch to light the “destin” LED. The channel BURN LED’s will light if they are routed to the selected source.

To route a stereo destination, press the left channel BURN switch. Both BURN LED’s light to show that it is routed. Once routed, you can press either left or right BURN switch to unroute it.

Cross-Routing Stereo
If you press the right channel BURN switch, the output will be “cross-routed” with left going to right and right going to left. The left channel Destination LED’s blink on the SixtyFour to show that it is cross routed.

Surround Routing
Surround Sources must be routed one channel at a time. Each individual Source driving a surround Destination must be routed individually. This provides a great deal of flexibility in working with multiple surround Sources. *For example, suppose you want to have your ProTools outputs 3 through 8 (PT 03 - PT 08) source the Surround outputs.*

Route:
PT03 to Left *S
PT04 to Right *S
PT05 to Center *S
PT06 to LRear *S
PT07 to RRear *S
PT08 to Sub *S

Destination Level Control Operations

Setting Destination Levels
Rotate a channel rotary pot to change a Destination level. Destination levels can be changed independently of which source is selected and whether the Destination has been routed or not.

Stereo Destinations have their level displayed under the left channel label and their stereo balance displayed in the right channel. The left pot controls the level, and the right pot controls the stereo balance.

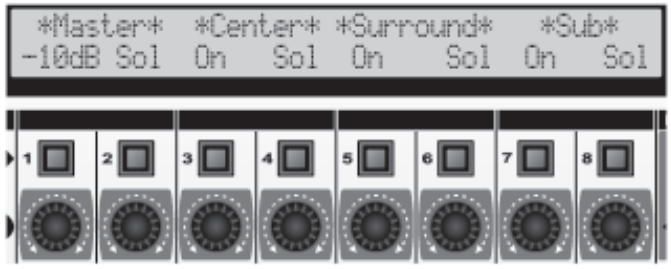
Setting Levels to Unity
Press and hold the “DEFAULT” switch. Press any channel SELECT switch, and the Destination level will jump to unity. If the Destination is stereo, the left channel SELECT switch will set the level to unity, and the right SELECT switch will set balance to center.

Setting Levels to Off
Press and hold the ALL switch and then press any channel SELECT switch, and the Destination level will jump to off. If the Destination is stereo, the left channel SELECT switch will set the level to off, and the right SELECT switch will set balance to center.

Setting Surround Levels
Before you set Surround levels, you must first set up your Surround labels as described earlier. Additionally, use the SixtyFour to route the desired sources to drive the Surround outputs. It is helpful to always have one of the SixtyFour’s memories programmed this way so that every time you want to monitor in Surround, you can simply recall that memory.

First, recall a memory that has the Surround outputs routed to the Surround Sources.

Then, press the STEREO/SURRND switch until the “SURRND” LED lights. The LCD will then appear as:



At the far left on the bottom row is the overall (Master) level of the surround outputs. If this number does not appear, then check the RS-232 cable connected to the SixtyFour and that it is powered on. Recheck the Destination labels to see that they are done properly.

Defaulting Surround Master Level to Unity
Press and hold DEFAULT, and then press SELECT 1 to set the Surround master to unity.

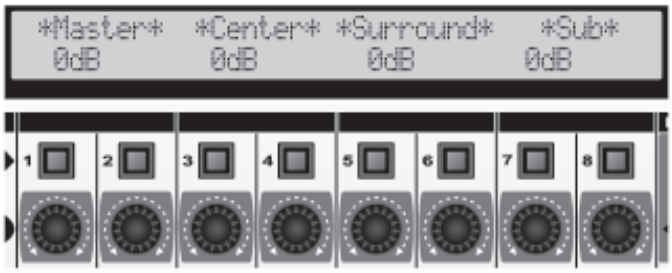
If it still does not appear, then press “SHIFT”, “UNDO” and “ENABLE” together to reset MotorMate and try again.

Rotary Pot 1 is the Surround Master level control, and can be set anywhere from +10dB to -96dB. This setting is saved in the MotorMate’s nonvolatile memory, so it will be recalled when MotorMate is powered on.

The SELECT switches control the Surround outputs as follows:

SELECT 1: Surround Master on/off.
SELECT 2: Solo the Left and Right front channels.
SELECT 3: Center channel on/off.
SELECT 4: Solo Center channel.
SELECT 5: Left Rear and Right Rear channels on/off.
SELECT 6: Solo Left Rear and Right Rear channels.
SELECT 7: Subwoofer channel on/off.
SELECT 8. Solo Subwoofer channel.

Surround Channel Offsets
Press in and hold the XYZ View stick and the LCD will



appear as below:
You can use these offsets to make adjustments in the Center, Rear, and Subwoofer channels for auditioning purposes. The rotary pots adjust these in this manner:

Rotary pot 3	Center channel offset.
Rotary Pot 5	Surround (Rear) channel offset.
Rotary pot 7	Subwoofer channel offset.

These offsets are saved in the MotorMate nonvolatile memory, so they will be recalled when MotorMate is powered on.

Defaulting Offsets to Unity
Press and hold the View Stick and press a SELECT switch to set that offset to unity.

If the sources that are routed into the Surround channels are not all set to the same level, those will affect the output levels in addition to the offsets. It is probably best to set all the source levels to the same value to avoid confusion.

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